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Gabriel Costa De Oliveira Software Engineer

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Graduated in Software Engineering from one of the **top universities in the Latin America**, with over **three years of professional experience** as a data scientist and backend developer. Furthrmore, I have been awarded in several competitive programming contests, which demonstrates my **strong analytical skills to solve complex problems**.

EDUCATION

Bachelor's in Software Engineering,

University of Brasília (UnB)

2019 - 2025

The University of Brasília advanced in the 2024 CWUR ranking, reaching the 11th position among Brazilian universities, 19th in Latin America, and 836th worldwide, placing it in the top 4% globally. See more.

RECENT WORK EXPERIENCE

AI.lab UnB

January 2024 — Present

Brasília, DF

Work on the high-impact Osiris Project, resulting from an **investment of \$700,000 USD**, developing AI applications to streamline workflows for **judges and prosecutors** in tax enforcement. Held dual roles as Data Scientist and Backend Developer.

Backend Developer

August 2024 — Present

- Develop APIs and AI services to integrate machine learning models aimed at improving the work of judges and prosecutors in tax enforcement.
- Deploy models to production using FastAPI, Docker containers, and MLOps practices.
- Implement unit and integration tests using Pytest.
- Apply parallel and distributed programming techniques to reduce processing time.
- Create new modules following a microservices architecture.

Data Scientist

January 2024 — August 2024

- Used **MLflow** for versioning and developing **pipelines** for **AI** models.
- Utilized MLflow for model **performance analysis** and testing different hypotheses.
- Implemented efficient pipelines for preprocessing (data mining, cleaning, and augmentation), vectorization, and storage of textual data.
- Leveraged LLMs such as Llama 3, along with RAG techniques and NLP for legal text classification.
- Successfully trained and integrated AI models for legal document classification.
- Applied Machine Learning (scikit-learn) and Deep Learning (PyTorch, TensorFlow).

Zeroo

September 2022 — November 2023

Android Developer

Brasília, DF

- Developed native Android app using Java/Kotlin
- Integrated AI models for object classification with TensorFlow and ML Kit
- Created requirements documentation using Mkdocs

- Implemented MVVM architecture with SOLID principles and GOF patterns
- Built relational database using SQLite3 with Room and LiveData

University of Brasília

March 2022 — August 2022

Brasília, DF

 $Data\ structures\ \mathcal{C}\ Algorithms\ teaching\ assistant$

Enhanced expertise in algorithms while developing technical communication skills:

- Greedy algorithms
- Dynamic Programming
- \bullet Tree structures
- Graph theory
- Complexity analysis (Big-O)

SKILLS

Languages C, C++, Java, Python, SQL

Tools Git, Linux, Sklearn, NLTK, TensorFlow, Hadoop, Pytorch, PySpark, mariaDB, MongoDB, MySql,

SQLite3, FastAPI, SQLAlchemy, Numpy, SymPy, Pandas, matplotlib & pytest

DevOps & QA CI/CD Pipelines, SonarQube, Unit Testing, Integration Testing, Docker & Kubernetes

Software Engineering Design Patterns, SOLID Principles, Clean Code, Relational Database Modeling, Messaging Sys-

tems, Parallel & Distributed Programming & Microservices

Methodologies Agile (Scrum, Kanban, XP) & TDD (Test-Driven Development)

Communication Portuguese (Native) & English (C1)

CERTIFICATIONS, AWARDS, AND HONORS

I possess not only advanced knowledge in data structures and algorithms but also a strong analytical ability to solve complex problems. These skills led me to the ICPC Brazilian Programming Finals in 2023 and a top placement in IEEEXtreme 17.0. Additionally, these competitions were instrumental in solidifying my Python and C++ expertise.

ICPC South America Brazil Finals — Honorable Mention	2023
ICPC South America-Brazil First Phase — Qualified for the Brazilian Finals, 66th Place	2023
IEEEXtreme 17.0 — 4th Best Brazilian Team, ranking among the top 14% globally	2023